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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,545	09/06/2000	Shyam Kumar Verma	208-6139 16	9919
20792	7590	09/11/2003		
MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			EXAMINER HAMLIN, DERRICK G	
			ART UNIT 1751	PAPER NUMBER

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/656,545	VERMA ET AL.
	Examiner	Art Unit
	Derrick G. Hamlin	1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 June 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) 37-42 and 79-92 is/are withdrawn from consideration.
- 5) Claim(s) 1-36 is/are allowed.
- 6) Claim(s) 43-78 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4.5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of 1-36 and 43-78 in Paper No. 8 is acknowledged. Therefor, claims 37-42 and 72-92 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Evaluations of level of ordinary skill in the art requires consideration of factors such as various prior art approaches employed, types of problems encountered in the art, rapidity with which innovations are made, sophistication of technology involved, educational background of those actively working in the field, commercial success, failure of others, and the inventor's educational level.

The "person having ordinary skill" in this art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this case reasonably reflect this level of skill.

Claims 43-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verma et al. (U.S. 6,004,475).

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Verma discloses an absorption solution for refrigeration systems, comprising at least one alkali metal halide in an amount of at least about 20 percent by weight based on the total weight of the solution and at least one heteropoly complex anion of a transition metal element in an amount sufficient to provide a corrosion inhibiting effect, said heteropoly complex anion comprising a compound selected from the consisting of [X_a Mb Oc]-n, [X_a Zd Mb Oc]-n, [X_a Zd Mb Oc He]-n, [X_a Mb Oc (OH)_f] -n, [X_a Zd Mb Oc (OH)_f] -n, and mixtures thereof,

wherein: X and Z are central heteroatoms selected from the group consisting of tellurium and elements of Groups IVB, VB, VIB, VIIB, VIIIB, IB, IIB, IIIA, IVA, and VA of the Periodic Table of Elements;

a is 1 or 2;

d is an integer from 0 to 4;

Mb Oc, Mb He, and Mb Oc (OH)_f are oxoanions in which M is a transition metal element selected from the group consisting of molybdenum and tungsten; b is an integer from 5 to 22; c is an integer from 20 to 70; e is an integer from 0 to 6; and f is an integer from 0 to 3; and

n is the charge of the anion,

wherein X is phosphorus, silicon, manganese, tellurium or arsenic, wherein at least one heteropoly complex anion is selected from the group consisting of phosphomolybdates, silicon molybdates, manganese molybdates, silicon tungstates, tellurium molybdates, arsenic molybdates and mixtures thereof,

wherein said at least one heteropoly complex anion comprises a phosphomolybdate of the formula [PMo₁₂O₄₀]⁻³, wherein said at least one heteropoly complex anion is present in an amount of 100 ppm to about 3000 ppm,

wherein X is a central heteroatom selected from the group consisting of phosphorus, silicon, manganese, arsenic, boron, iron, tellurium, copper, zinc, aluminium, tin, zirconium, titanium, vanadium, antimony, bismuth, and chromium; and Z is a central heteroatom selected from the group consisting of manganese, cobalt, nickel, copper, zinc, vanadium, niobium, and tantalum. (claims 1-9, at col. 7, line 64- col. 8, line 49) The reference further teaches that lithium hydroxide is used to adjust the pH (col. 6, lines 7 and 8).

The reference differs from the instant claim, as it teaches a high concentration of metal halide. It is the examiners position that, since the instant application teaches that metal halides are used and does not restrict the concentration, the instant composition could be made in view of the reference. If the applicant submits a declaration that shows the concentration of metal halide disclosed in the reference would be detrimental to his invention, the rejection may be overcome.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to create the instantly claimed absorption fluid, as the reference teaches an absorption solution for refrigeration systems comprises at least one heteropoly complex anion of transition element and at least one alkali metal hydroxide and/or alkaline earth metal hydroxide.

In view of the forgoing, the above claims have failed to be patently distinguishable over prior art.

The remaining references listed on form(s) 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Allowable Subject Matter

Claims 1-36 are allowed.

The following is an examiner's statement of reasons for allowance: The reference fails to teach an absorption solution for refrigeration systems comprises at least one heteropoly complex anion of transition element and either aqueous ammonia. Infact, the reference teaches away from the use of ammonia (col. 2, lines 16 and 17).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick G. Hamlin whose telephone number is (703) 305-0590. The examiner can normally be reached on Monday-Thursday and alternating Fridays from 8:30 AM - 5:00 PM.

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If reasonable attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta, can be reached on (703) 308-4708. The fax phone number for this Group is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Derrick G. Hamlin

9/8/03




YOGENDRA N GUPTA
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